Claims

What is claimed is:

1. A system for differentiating at least two XML data sources, comprising:
   a component that determines differences between the XML data sources; and
   a formatter that describes the differences.

2. The system of claim 1, the component being a diff engine that determines the differences based upon one or more input options.

3. The system of claim 2, the options include at least one of: none, ignore empty element, ignore white space, ignore comments, ignore attribute order, ignore namespace, ignore prefix, and ignore DTD.

4. The system of claim 2, the diff engine adapted to receive a plurality of methods and associated parameters relating to the XML data sources and return one or more difference results.

5. The system of claim 4, the one or more difference results including at least one of: a node field, a lexical-equal field, a diff field, and one or more file fields.

6. The system of claim 4, the one or more results further comprising at least one of: element value not matched, white spaces not matched, comment node not matched, processing instructions not matched, text node not matched, attribute name or value not matched, namespaces not matched, prefix not matched, extra nodes in source file, extra nodes in target file, and node type not matched.

7. The system of claim 4, the formatter adapted to generate a container that includes the results of the diff engine.

8.   The system of claim 7, the container including a nested diffgram that includes difference information between one or more files, the files describe differences between the XML data sources.

9.   The system of claim 7, the container including S states, S being an integer, the states representing comparisons between a reference file and one or more other files.

10.   The system of claim 7, the container including S states, S being an integer, the states representing comparisons between a plurality of reference files and one or more other files.

11.   The system of claim 7, the container including beginning and ending tags to define the boundaries of the container.

12.   The system of claim 7, the container including an instance data field and a before data field to describe the differences between the XML data sources.

13.   The system of claim 7, the container including at least one of an ID field, a changes field, and an error field.

14.   A method to facilitate XML data processing, comprising:
       comparing two or more source files to determine if differences exist between the source files; and
       filling a container with previous state results and current state results based at least in part upon the comparison.

15.   The method of claim 14, further comprising providing options that include ignoring one or more elements during the comparison.

16. The method of claim 14, returning one or more difference results relating to the differences between the two or more source files.

17. The method of claim 14, further comprising nesting diffgrams *via* a comparison of two or more records that describe differences between XML data sources.

18. The method of claim 14, further comprising generating S states, S being an integer, the states representing comparisons between the two or more source files.

19. The method of claim 14, further comprising generating S states, S being an integer, the states representing comparisons between a plurality of source files.

20. A signal to communicate XML data between at least two nodes, comprising:
a data packet comprising:
  a difference component to fill a container with states of XML data corresponding to the at least two nodes;
  a first data field representing a previous state of the XML data; and
  a second data field representing a current state of the XML data.

21. The signal of claim 20, the data packet adapted to be transmitted to at least one of: a local network system, a remote network system, a local database, and a remote database.

22. A system to facilitate communication of a data source, comprising:
  a transmission system that determines a previous and a current state of a data source; and
  a container configured by the transmission system having tags to define boundaries for the data sources, the container including an indication of the previous and the current states of the data sources within the defined boundaries.

23.   The system of claim 22, further comprising a receiving system to process contents of the container.

24.   A computer readable medium having stored thereon a data structure to represent XML

data, comprising:

 a container field that delineates boundaries of an XML data source;

 a previous state field associated with the container field comprising data representing a prior status of the XML data source; and

 a current state field associated with the container field comprising data representing

one or more changes to the XML data source.

25.   A system to facilitate XML data communications, comprising:

 means for determining differences between two or more XML source files; and

 means for representing previous states and current states corresponding to the differences between the two or more XML source files.

26.   A system to communicate XML data between nodes, comprising:

 a first node operatively coupled to a database, the database having one or more data records; and

 a buffer associated with the first node that reads the database and compares a reference data source to determine differences among the one or more data records, the first node constructs one or more diffgrams that describe the differences between the reference data source and the one or more data records.

27.   The system of claim 26, the one or more diffgrams employed to at least one of correct erroneous entries and update data records that have changed over time by enabling the database to update data identified by state information included in the diffgram.

28.   The system of claim 26, the one or more diffgrams employed to reconstruct a
faulted database.

29.   The system of claim 26, the one or more diffgrams employed to synchronize the
reference data source to one or more other databases.

30.   A system to communicate XML orders between nodes, comprising:

an ordering subsystem to generate orders to one or more databases, the one or
more databases having one or more inventory records; and

a component associated with the one or more databases that compares the one or
more inventory records to determine differences among the orders, the component
constructs one or more diffgrams that describe the differences between the one or more
inventory records and the order to indicate status of the inventory.

31.   An XML compatible diffgram that stores states of an XML data source,
comprising:

a container to describe boundaries of the diffgram;

a first component that indicates a prior state of the XML data source; and

a second component that represents one or more state changes to the XML data
source.